

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-15. (cancelled)

16. (new) A fuzzy logic method for reasoning about data, comprising the steps of:
- (i) accessing the data;
  - (ii) determining a type of the data;
  - (iii) selecting a rule for firing based on the determined type of the data;
  - (iv) obtaining fuzzy membership grades;
  - (v) aggregating the fuzzy membership grades by invoking a parametric formulation;
  - (vi) applying a compositional rule of inference parametrically to extract a consequent to obtain a fuzzy output; and
  - (vii) defuzzifying the fuzzy output.

17. (new) The method according to claim 16, further comprising the step of aggregating the consequents from the fired rules.

18. (new) The method according to claim 16, further comprising the step of rearranging a sequence of the data prior to the determining step.

19. (new) The method according to claim 16, wherein the data is stored in a database.

20. (new) The method according to claim 16, wherein the type of the data is selected from a group consisting of numeric, linguistic and a hybrid combination thereof.

21. (new) The method according to claim 16, wherein the type of the data is linguistic, and wherein the rule has a singleton consequent.

22. (new) The method according to claim 16, wherein the type of the data is hybrid, and wherein the rule has a singleton consequent.
23. (new) The method according to claim 16, wherein the firing of the rule uses a special t-norm operator.
24. (new) The method according to claim 16, wherein the firing of the rule uses an algebraic product norm.
25. (new) The method according to claim 16, wherein the type of the data is numeric, wherein the firing of the rule uses a parametric t-norm.
26. (new) The method according to claim 16, further comprising the step of interacting with a client device.
27. (new) The method according to claim 26, wherein the client device is wireless.
28. (new) The method according to claim 16, wherein the data is medical data.
29. (new) A fuzzy logic expert system for reasoning about data, comprising:
- (i) means for accessing the data;
  - (ii) means for determining a type of the data;
  - (iii) means for selecting a rule for firing based on the determined type of the data;
  - (iv) means for obtaining fuzzy membership grades;
  - (v) means for aggregating the fuzzy membership grades by invoking a parametric formulation;
  - (vi) means for applying a compositional rule of inference parametrically to extract a consequent to obtain a fuzzy output; and
  - (vii) means for defuzzifying the fuzzy output.

30. (new) The expert system according to claim 29, further comprising means for aggregating the consequents from the fired rules.
31. (new) The expert system according to claim 29, further comprising the means for rearranging a sequence of the data prior to the determining step.
32. (new) The expert system according to claim 29, wherein the data is stored in a database.
33. (new) The expert system according to claim 29, wherein the type of the data is selected from a group consisting of numeric, linguistic and a hybrid combination thereof.
34. (new) The expert system according to claim 29, wherein the type of the data is linguistic, and wherein the rule has a singleton consequent.
35. (new) The expert system according to claim 29, wherein the type of the data is hybrid, and wherein the rule has a singleton consequent.
36. (new) An intelligent data management system for reasoning about data, comprising:
- (i) data source for providing the data;
  - (ii) means for accessing the data;
  - (iii) means for determining a type of the data;
  - (iv) means for selecting a rule for firing based on the determined type of the data;
  - (v) means for obtaining fuzzy membership grades;
  - (vi) means for aggregating the fuzzy membership grades by invoking a parametric formulation;
  - (vii) means for applying a compositional rule of inference parametrically to extract a consequent to obtain a fuzzy output;
  - (viii) means for defuzzifying the fuzzy output; and
  - (ix) client device for accessing the output.

37. (new) The system according to claim 36, wherein at least one of the client devices is a wireless device.

38. (new) The system according to claim 36, further including a gateway to facilitate wireless access to the system from a wireless client device leveraging existing wireless networks.

39. (new) The system according to claim 36, further including a load balancer for balancing loads between client devices and the system.

40. (new) The system according to claim 36, further including an integrated billing component.

41. (new) A computer program product comprising:

a memory having microcontroller-readable code embedded therein for reasoning about data using fuzzy logic, comprising:

- (i) code means for accessing the data;
- (ii) code means for determining a type of the data;
- (iii) code means for selecting a rule for firing based on the determined type of the data;
- (iv) code means for obtaining fuzzy membership grades;
- (v) code means for aggregating the fuzzy membership grades by invoking a parametric formulation;
- (vi) code means for applying a compositional rule of inference parametrically to extract a consequent to obtain a fuzzy output; and
- (vii) code means for defuzzifying the fuzzy output.

42. (new) The computer program product according to claim 41, further comprising code means for aggregating the consequents from the fired rules.

43. (new) The computer program product according to claim 41, further comprising code means for rearranging a sequence of the data prior to the determining step.

44. (new)        The computer program product according to claim 41, wherein the data is stored in a database.

45. (new)        The computer program product according to claim 41, wherein the type of the data is selected from a group consisting of numeric, linguistic and a hybrid combination thereof.